

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/107,787	06/30/98	BUCHANAN	J 10000-1

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IM22/1115

EXAMINER

BUSHEY, C

ART UNIT PAPER NUMBER

1724

DATE MAILED:

11/15/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/107,787	Applicant(s)	BUCHANAN ET AL
	Examiner Scott Bushey	Group Art Unit 1724	

Responsive to communication(s) filed on Oct 5, 1999

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

Claim(s) 1-10 is/are pending in the application.

Of the above, claim(s) 4 and 10 is/are withdrawn from consideration.

Claim(s) _____ is/are allowed.

Claim(s) 1-3 and 5-9 is/are rejected.

Claim(s) _____ is/are objected to.

Claims _____ are subject to restriction or election requirement.

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on Jun 30, 1998 is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 1 sheet

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. Applicant's election with traverse of Group I, claims 1-9, and Species A, to which claims 1, and 5-9 are said to be readable thereon in Paper No. 7 is acknowledged. The traversal is on the grounds that the apparatus as recited by independent claims 1-3 should not be restricted from the process as recited by claim 10 and that an election of species should not be required, since claims 2 and 3 could be amended to indicate that a downcomer is not present. This is not found persuasive because the claims have not been amended and they are therefore restrictable and subject to the election of species for the same reasons as set forth in the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

In view of the fact that the Examiner has previously determined that apparatus claims 1-3 are generic to the disclosed and claimed species, claims 1-3, and 5-9 have been examined on the merits herein.

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The declaration does not acknowledge the filing of the provisional application 60/065,498 filed November 19, 1997 upon which applicant's claim for domestic priority under 35 U.S.C. 119(e) is based. A new oath or declaration is required in the body of which the

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provisional application should be identified by application number and filing date, and wherein the claim for domestic priority under 35 U.S.C. 119(e) should be made.

3. The disclosure is objected to because of the following informalities: 1) page 1, line 23, "(Herbert)" should be replaced by --(Richard)--; 2) page 6, line 25 does not make sense as presently recited; and 3) page 7, line 10 mentions Figure 6, which does not exist in the instant application.

Appropriate correction is required.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "series of cyclonic devices within an apparatus, as recited by each of claims 1-3, and 5-9; the "sidewalls of adjacent cyclonic devices contact each other", as recited by instant claim 6; and the cyclonic device sidewalls being "cylindrical, conical, hexagonal or octagonal", as recited by instant claim 7, must be shown or the features canceled from the claims. No new matter should be entered.

5. Claims 1-3, and 5-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-3, the phases "may be adjacent" and "can flow" should be replaced by positive structural recitations which clearly recite that which applicant intends to claim as the instant invention.

In claim 1, "I" should be deleted from the end of line 13.

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In claim 3, lines 14-15, "Scott-I'm not quite clear on this concept" should be deleted.

In claim 5, line 2, "on at least side wall" does not make sense.

Claim 8 is lacking a period at the end thereof.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

7. Claims 1-3, 5, and 7-9 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Sheinman (Figs. 1 and 2; col. 2, line 26 through col. 3, line 1).

Applicant should note that the liquid enters the cyclonic device from a tray outside located outside of the sidewalls of the device. The liquid collects on the tray until it reaches a level equal to the top end of plenum or downcomer (7), at which time it flows downwardly through (7) to the lower end thereof wherein the liquid exits pipe (7) through the sidewall thereof near the bottom end of the cyclonic region. Applicant should also recognize that outlets (5) arranged in the sidewall of the cyclonic device are provided between the first set of spin devices (11) and the second set of spin devices (12), the second set of spin devices being arranged near of the midpoint of the cyclonic device and occupying about 15% of the elevation of the cyclonic device.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Sheinman alone, or alternatively, further in view of Stober.

Sheinman (Figs. 1 and 2; col. 2, line 26 through col. 3, line 1) as has been applied above substantially discloses applicant's invention as recited by instant claim 6, except for the sidewalls of adjacent cyclonic devices being in contact with one another. It would have been obvious for an artisan at the time of the invention, to modify the arrangement of the plural cyclonic devices as taught by Sheinman, to be tightly packed and in contact with one another, since such would provide for a greater contact capacity of the gas and liquid phases for a tower of a given cross-sectional area. Alternatively, it would have been obvious for an artisan at the time of the invention, to modify the arrangement of the plural cyclonic devices as taught by Sheinman, to be tightly packed and in contact with one another, in view of the teaching by Stober (See Fig. 1),

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wherein the contact element density is maximized within the tower thereof to take full advantage of the contact capabilities of a tower of a given cross-sectional area.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is (703) 308-3581.

C. SCOTT BUSHEY
PRIMARY EXAMINER
GROUP 1300

csb

November 10, 1999


11-10-99